Amendments to the Specification:

Please amend the specification as follows:

Please replace the paragraph beginning at page 5, line 24, with the following rewritten paragraph:

The present invention provides a system, denoted generally by reference numeral 1 in Fig. 1 or reference numeral 2 in Fig. 31, using controller 50 (see Fig. 9) or controller 50B (see Fig. 34), for assisting a driver operating a vehicle 5 traveling on a road. The system 1 or 2 comprises a scene recognition device 8 (see Fig. 1) or 8A (see Fig. 31) detecting an obstacle in front of the vehicle 5. The system 1 or 2 comprises at least two subsystems. In Fig. 9, the at least two subsystems include a first subsystem 51a, 52a, 54a, and 55a, and a second subsystem 51b, 52b, 53, 54b, and 55b. In Fig. 34, the at least two subsystems include, in addition to the first and second subsystems, a third subsystem 51c, 52c, 54c, and 55c, and a fourth subsystem 51d, 52d, 54d, and 55d. As the discussion proceeds, it will be understood that each of the at least two subsystems conducts one of different analyses of the detected obstacle at one of the blocks labeled "target discrimination devices" 51a and 51b (see Figs. 9 and 34) and blocks labeled "contact possibility discrimination devices" 51c and 51d. As the discussion proceeds, it may well be understood that conducting one of different analyses of the detected obstacle provides one of different partially overlapped periods allowing determination of a risk RP1 or RP2 derived from the detected obstacle to give a variable (FA1, FB1, Fa2, Fb2, Fc1 or Fc2, see Fig. 9; FA3, FB3, FA4, FB4, Fc3, or Fc4, see Fig. 34). A selection device selects one out of concurrently occurring ones of the variables to produce out of the variables a final variable existing over at least adjacent two of the different period. The final variable (FA, FB or Fc) is transmitted to the driver via a haptic input, such as a reaction force from a driver controlled input device or a change in acceleration/deceleration of the vehicle.

Please replace the paragraph beginning at page 7, line 5, with the following rewritten paragraph:

Turning now to Figs 1 and 2, the scene recognition device 8 includes a radar 10 positioned at a center of a front grill or a front bumper of the vehicle 5 (see Fig. 2) for transmitting pulsed beam or radar waves ahead of the vehicle in order to detect obstacles within the field of view of the radar. Although it may be a conventional millimeter wave, frequently modulated continuous (FMCW) radar, the radar 10, in this embodiment, is a conventional infrared laser radar. An infrared pulsed beam travels, as a transmitted beam, toward a measurement zone. A light receiving device receives the transmitted beam returning from an obstacle inside the measurement zone. With the use of a rotating polygonal mirror, two-dimensional scanning in the forward direction is possible, so that the pulsed beam can be swiveled horizontally due to the rotation of the polygonal mirror, and the pulsed beam can be swiveled vertically due to a plurality of mirror surfaces of the polygonal mirror inclined at different angles. In the exemplary embodiment, the pulsed beam can be swiveled horizontally and laterally about 6 degrees to each side of a longitudinal line passing through the center of the vehicle 5.

Please replace the paragraph beginning on page 14, line 18, with the following rewritten paragraph:

Determination of the first risk RP1 is allowed during a stable period when the vehicle 5 follows the preceding vehicle (or obstacle) in front. Determination of the second risk RP2 is allowed during a transient period partially overlapping the [[state]] stable period. The first risk RP1 may be called a stable risk, and the second risk RP2 a transient risk. The repulsive force is a force applied by an imaginary elastic body compressed between the vehicle 5 and the preceding vehicle in front. The imaginary elastic body was briefly mentioned in connection with Figs. 12 and 13, but will be further described later in connection with Fig. 29.

Please replace the paragraph beginning on page 24, line 11, with the following rewritten paragraph:

In Fig. 25, at step S1001, the controller 50 determines whether or not the accelerator pedal 62 is pressed from the driver power demand SA from the accelerator pedal stroke sensor 64. If the accelerator pedal 62 is not pressed, the routine proceeds to step S1002. At step S1002, the controller 50 determines whether or not the accelerator pedal 62 has been released quickly. This determination is made by comparing operation speed of the accelerator pedal 62 to a predetermined value. The operation speed may be calculated from a time rate of change in driver power demand SA from the accelerator pedal stroke sensor 64. If, at step S1002, the controller 50 determines that the accelerator pedal 62 has been slowly released, the routine proceeds to step S1003. At step S1003, the controller 50 sets a driving force correction amount Δ Da to 0 (Δ Da = 0). At the next step S1004, the controller 50 sets a braking force ~~control~~ correction amount Δ Db to the repulsive force indicative final variable Fc.

Please replace the paragraph beginning on page 28, line 13, with the following rewritten paragraph:

In the case where the vehicle 5 is approaching the preceding vehicle, firstly, the weighted reaction force value FA2 is generated during the transient period before generation of the reaction force FA1 during the [[state]] stable period. It is therefore possible to clearly transmit the transient risk RP2 at an early stage of approaching the preceding vehicle. The repulsive force value Fc2 is not weighted so as to prevent excessive correction of driving force and/or braking force.

Please replace the paragraph beginning on page 28, line 26, with the following rewritten paragraph:

(1) With reference to Fig. 9, the first target discrimination device 51a determines whether or not the detected obstacle is a target obstacle based on a distance X between the vehicle 5 and the detected obstacle and a speed Vh of the vehicle 5. The first or stable risk (RP) calculation device 52a determines a first or stable risk RP1 upon determination by the first target discrimination device 51a that the detected obstacle is the target obstacle. In response to the [[state]] stable risk RP1, the first reaction force calculation device 54a determines first accelerator and brake pedal reaction force values FA1 and FB1.

Please replace the paragraph beginning on page 29, line 27, with the following rewritten paragraph:

(2) The first repulsive force calculation device 55a determines a first repulsive force value Fc1 versus the [[state]] stable risk RP1. The second repulsive force calculation device 55b determines a second repulsive force value Fc2 versus the transient risk RP2. The repulsive force selection device 57 selects the larger one of the repulsive force values Fc1 and Fc2. The controller 50 provides the selected one, as final variable Fc, for an appropriate reduction in driving force as if it were caused due to occurrence of running resistance due to the repulsive force indicated by the final variable Fc. Acceleration/deceleration control caused due to this reduction in driving force provides a haptic input to the driver as a clear assist. Weighting is not performed in producing the repulsive force indicative final variable Fc in order to avoid an unnecessary large change in driving force control.

Please replace the paragraph beginning on page 31, line 2, with the following rewritten paragraph:

(6) The controller 50 performs a weighting of the second reaction force values Fa2 and Fb2 when both the stable risk RP1 and the transient risk RP2 are greater than or equal to

a predetermined value and the second reaction force values Fa2 and Fb2 determined versus the transient risk RP2 are greater, in absolute value, than the first reaction force values FA1 and FB1 determined versus the stable risk RP1. Referring to Fig. 30(f), in the exemplary embodiment, the controller 50 performs a weighting of the second reaction force values Fa2 and Fb2 during a time from ta to tc. The transient risk RP2 can be transmitted to the driver clearly and impressively via the weighted second reaction force values Fa2 and [[Eb2]] Fb2.

Please replace the paragraph beginning on page 36, line 16, with the following rewritten paragraph:

Determination of the third risk RP3 is allowed during a portion of the [[state]] stable period provided by the first target discrimination device 51a. Determination of the second risk RP2 is allowed during a portion of the transient period provided by the second target discrimination device 51b.